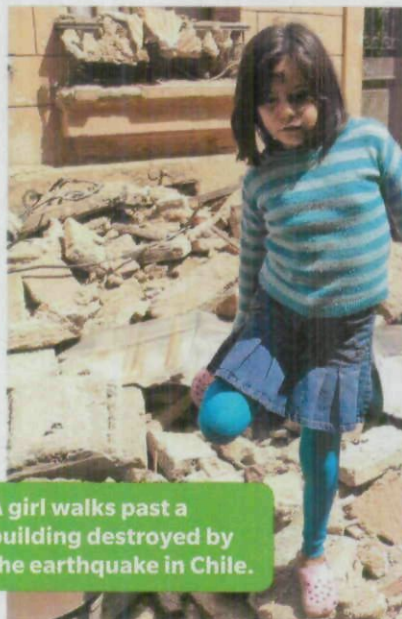


When the Ground

Floors shook. Books toppled off shelves. Ceilings fell. The power went out. That's what happened in Chile recently. A powerful earthquake struck the South American nation. Hundreds of people were killed. Millions were left homeless.

"It was the scariest experience of my life, just a violent shake. My thought was the house was going to come falling down," Sarah Botkin, 27, told a reporter in her home state of Washington. She teaches English in Santiago, Chile's capital city.

The news of what happened in Chile was all too familiar. The quake came not long after the Haiti earthquake. That disaster devastated the poor Caribbean nation. Officials now estimate



A girl walks past a building destroyed by the earthquake in Chile.

that 230,000 people were killed.

As people worldwide work to help the victims of these natural disasters, many are wondering why nature is acting up—and if it will continue to do so.

Earthquake Science

The earthquakes in Haiti and Chile occurred where earthquakes usually do—on the edges of huge plates on the Earth's surface. Called **tectonic** plates, these giant slabs of earth fit together like a puzzle (*see map*). As they move, the plates pull apart from, collide into, or slide against each other. Sometimes pressure builds up, causing pieces of the plates to break. This releases energy that can cause the ground to shake violently. Earthquakes are often followed by related quakes, called aftershocks.

Although the same forces—shifting plates—caused the two recent quakes, the events weren't related. Moreover, the fact that

An apartment building in Concepción, Chile, broke in half during the earthquake.

Words to Know

tectonic (tek-tah-nik) *noun*.
Relating to the structure or movement of the Earth's crust.

evacuate (i-vak-yoo-ate) *verb*. To move away from an area because it is dangerous there.

nd Shakes

Big earthquakes have rocked the world. Why?

the earthquakes happened around the same time doesn't mean more are soon to come.

"Earthquakes occur all the time," explains Julie Dutton. She's an earthquake expert with the United States Geological Survey. "Sometimes earthquakes are going to come back-to-back," says Dutton.

Walls of Water

The quake in Chile caused another problem—a tsunami (soo-NAH-mee). Tsunamis are waves that are often caused by earthquakes under the seafloor.

In Chile, the point where the plates shifted was off the coast. The undersea quake caused the seafloor to move. That sent waves rippling through the Pacific Ocean.

A tsunami alert was put in place for countries along the Pacific. People in Hawaii and Japan were **evacuated** from coastal areas. In 1960, a powerful earthquake in Chile created a tsunami that killed dozens of people in Pacific coastal areas.

This time, some big waves did strike parts of the Chilean coast, causing major damage to seaside towns. But the waves on distant shores across the Pacific were not as big as was feared.

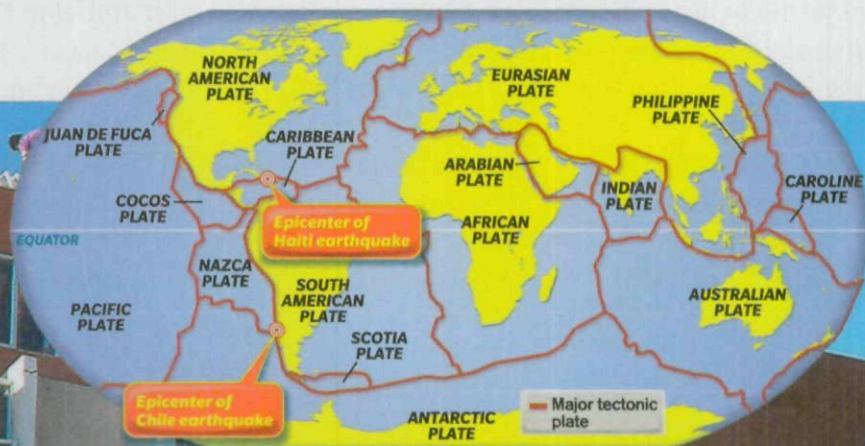
What Can Be Done?

Scientists can't predict earthquakes. But they are getting better at knowing the likelihood that one will occur. "There are definitely areas that are more

likely to have earthquakes or where the [number] of earthquakes is higher," Dutton says. Chile has frequent earthquakes, she adds.

Because of that, Chile works to make sure they have strong buildings. Even though the earthquake in Chile was more powerful than the one in Haiti, the Chile quake caused less damage. That's partly because many buildings in Chile are stronger than those in Haiti.

Warning systems for earthquakes and tsunamis help too. And when disaster does strike, people are there to help. People worldwide raised money for the people of Haiti and Chile, and continue to. ■



BACK TO YOU

● For more information about what you can do to help earthquake victims, visit the Scholastic Kids Press Corps at www.scholastic.com/kidspress.

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